

Abstract

Title: Analysis of the toss and impact in the tennis serve

Objectives: The objective of our work is to analyse the phase of toss and hit in tennis serve and to compare the results between the players themselves.

Methods: As the main method of data collection we used kinematic 3D analysis. Additional method was semi-structured interview with selected players for research.

Results: We found that more stable performance at the phase of toss and hit achieves the player with the higher position on the tennis ranking. Furthermore we found that the ball in all serves was hit in front of the players body. The largest range of variation (most unstable) in both players was width M, that means hitting ball in a frontal plane in consideration of the vertical axis Y established by left foot tip designed by the server's. Conversely the most stable in both players was height of shoulders when hit.

Keywords: tennis serve, toss, hit, kinematic 3D analysis